

Consultant's Corner: Specification: Standby Engine Generator



consultants corner

Part 4-AUTOMATIC TRANSFER SWITCH 4.01 GENERAL

The automatic transfer switch shall be rated ____ amps, ____ volts and have ____ poles. The standard control components shall be compatible with the requirements of the standby set and provide the following features:

- a) UL 1008 listed.
- b) 100% equipment rated. Can be used at rated current, continuous duty with deration.
- c) NEMA 12 enclosure, NEMA 3R if plans indicate transfer switch will be located outdoors.
- d) Contacts shall be electrically operated and mechanically held.
- e) There shall be front access to all solid state control boards.
- f) Control boards are to be protected in a separate lockable enclosure located in the door of the automatic transfer switch. It shall have a transparent cover to allow visual reading of voltage settings and time delays.
- g) The automatic transfer switch shall contain a neutral block suitable for the connection of all neutral conductors.
- h) The transfer time shall be 160 milliseconds or less.
- i) The normal source voltage shall be monitored across all phases of normal power with drop out and pick up points adjustable from 70% to 90%.
- j) The switch must contain a manual operating handle.
- k) Utility interrupt delay shall be adjustable from 5 seconds to 3 minutes.
- l) The automatic transfer switch shall have an engine warm up bypass selector switch.
- m) Standby voltage required before transfer shall be adjustable from 70% to 90% of nominal, standby frequency required before transfer shall be adjustable from 80% to 90% of nominal.
- n) Return to utility delay shall be adjustable from 1 to 30 minutes.
- o) Engine cool down timer shall be adjustable from 1 to 30 minutes.
- p) Minimum run timer shall be adjustable from 5 to 30 minutes.
- q) The automatic transfer switch shall include a 7 day exerciser.
- r) The automatic transfer switch shall have status lights to provide a visual read out of operation sequence including: Utility on, engine warm up, engine warm up bypass, standby voltage ready, standby frequency ready, standby operating, return to utility, engine cool down, engine minimum run, switch in fast test mode.
- s) Front mounted controls shall include a selector switch for normal test and fast test mode. It will also have utility and emergency lights to indicate switch position and an lamp to indicate standby operating.
- t) The automatic transfer switch shall provide one set of auxiliary contacts.
- u) The 100 to 1200 Amp 600 Volt switches shall incorporate built-in-arc shutes to suppress and extinguish the arc.